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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 13111-00023-US									
	Application Number 10/541,157-Conf. #6306	Filed June 30, 2005									
	First Named Inventor Son Nguyen Kim et al.										
	Art Unit 1796	Examiner H. L. Pezzuto									
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table><tbody><tr><td><input type="checkbox"/> applicant /inventor.</td><td>_____ /R. James Balls/ Signature</td></tr><tr><td><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td>_____ R. James Balls Typed or printed name</td></tr><tr><td><input checked="" type="checkbox"/> attorney or agent of record. Registration number 57,703</td><td>_____ (202) 331-7111 Telephone number</td></tr><tr><td><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____</td><td>_____ May 4, 2009 Date</td></tr></tbody></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input type="checkbox"/> *Total of 1 forms are submitted.</p>				<input type="checkbox"/> applicant /inventor.	_____ /R. James Balls/ Signature	<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	_____ R. James Balls Typed or printed name	<input checked="" type="checkbox"/> attorney or agent of record. Registration number 57,703	_____ (202) 331-7111 Telephone number	<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	_____ May 4, 2009 Date
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Docket No.: 13111-00023-US  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Son Nguyen Kim *et al.*

Application No.: 10/541,157

Confirmation No.: 6306

Filed: June 30, 2005

Art Unit: 1796

For: AMPHOLYTIC COPOLYMER AND USE  
THEREOF

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Examiner: H. L. Pezzuto

**REASONS FOR REQUESTING PRE-APPEAL BRIEF REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Madam:

Applicants hereby request pre-appeal brief review of the outstanding obviousness rejection in the above-identified application.

As an initial matter, the text of the Office Actions only reject claims 30-31 but the Office Action Summaries list claims 30-31 *and* claims 36-47 as rejected. Applicants have previously requested clarification on this point. Specifically, applicants asked whether claims 36-47 are allowable but for their dependency from claim 30 or whether these claims are subject to a rejection. *See* applicants response filed March 4, 2009. No clarification has been provided to applicants. Applicants assume the claims are allowable but for their dependency from claim 30 since these claims and their limitations have never been addressed by the examiner. Clarification is requested.

With respect to claims 30-31, applicants request pre-appeal brief review of the obviousness rejection because the rejection fails to account for every element of the claims and does not consider the teaching away in the art. Instead, the rejection applies the references

generally without articulating any reason to modify the references to arrive at the claimed subject matter.

The examiner has rejected claims 30-31 under 35 U.S.C. § 103(a) as being obvious over any of the following four references:

- (1) Galleguillos *et al.*, U.S. Patent No. 6,361,768 (“Galleguillos *et al.*”);
- (2) Jenkins, U.S. Patent No. 5,639,841 (“Jenkins”);
- (3) Blankenburg *et al.*, U.S. Patent No. 6,403,074 (“Blankenburg *et al.*”); or
- (4) Morschhäuser *et al.*, U.S. Patent No. 6,645,476 (“Morschhäuser *et al.*”).

The references, even in combination, do not account for an anionic component and a cationic component being used together in the claimed ratios. All the claim limitations must be accounted for to establish *prima facie* obviousness. *In re Vaeck*, 947 F.2d 488 (Fed. Cir.1991); *In re Royka*, 490 F.2d 981 (CCPA 1974). The Board of Patent Appeals and Interferences recently stated:

When determining whether a claim is obvious, an examiner must make a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, “obviousness requires a suggestion of all limitations in a claim.” *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, “*there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*” *KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)

*In re Wada and Murphy*, Appeal 2007-3733 (Bd. Pat. App. & Inter. 2008).

The instant claims recite a molar ratio of compound a) (the anionic component) to compound b) (the cationic component) from 0.5:1 to less than 2:1. None of the applied references account for these elements and Galleguillos *et al.* actually teach away from the claimed ratio.

Galleguillos *et al.* describes a polymer or copolymer formed by an anionic component to cationic component in a very broad range of **2:1 to 1:450**, which does not overlap with the claimed range. “A particular parameter must first be recognized as a result-effective variable,

*i.e.*, a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” MPEP § 2144.05; *In re Antonie*, 559 F.2d 618 (CCPA 1977).

Furthermore, Galleguillos *et al.* specifically teaches away from claimed range by indicating that a large excess of cationic monomers over anionic monomers should be used. *See, e.g.*, Col. 12, lines 45-59. The specification explains:

A preferred ratio of cationic monomers to anionic monomers is from about 2 to about 16, with the ratio of about 3 to 16 being further preferred. Selecting a ratio within this range has two advantages. First, it facilitates polymerization. The cationic and anionic monomers form inter and intra salt units which cause the copolymer to precipitate from the solvent in the form of a fine powder. This facilitates formation of the copolymer by precipitation polymerization. Second, the presence of anionic and cationic groups in the same polymeric molecule renders the copolymer compatible with cationic, anionic, and amphoteric surfactants typically used in cosmetic, household, cleaning, pharmaceutical, and other formulations.

Galleguillos *et al.*, Col. 12, lines 47-59.

Here, the specification expressly teaches that a large excess of cationic component is preferred to impart specific advantages. In fact, every example of Galleguillos *et al.* has the molar amount of cationic compound in large excess of the molar amount of anionic compound and is far outside the range of the instant claims. The data from the examples is summarized in the following table.

Example	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Anionic Component (MAA)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cationic Component (MDAPMA)	3.1	6.43	6.43	8.19	11.27	6.43	6.43	6.42	6.42	6.42	6.43	6.43	7.77	6.43
<b>Ratio</b>	<b>1:3</b>	<b>1:6</b>	<b>1:6</b>	<b>1:8</b>	<b>1:11</b>	<b>1:6</b>	<b>1:6</b>	<b>1:6</b>	<b>1:6</b>	<b>1:6</b>	<b>1:6</b>	<b>1:6</b>	<b>1:8</b>	<b>1:6</b>

The remaining references do not make up for the deficiencies in Galleguillos *et al.*

With respect to Jenkins, the examiner points to the abstract where it describes polymers comprising the reaction product of “about 1-99.8 weight percent of one or more nonionic,

*cationic, anionic* or amphoteric monomers”(emphasis added) (*see, e.g.*, the abstract of Jenkins). Jenkins, however, does not require that both an anionic and cationic monomer be employed together—their combination is optional. In fact, Jenkins does not appear to describe any examples whatsoever where both an anionic monomer and a cationic monomer are used together or even specify their use in any particular ratio.

Additionally, the claims include a specific amide-group containing compound in combination with the cationic component and anionic component. To account for this element of the claims, the examiner point to column 3, lines 34-67 of Jenkins, which is reproduced below with the claimed amide-group containing compounds highlighted.

The polymers of this invention can also contain a significant proportion of one or more monoethylenically unsaturated monomers (i.e., component (B)). The preferred monomers provide water insoluble polymers when homopolymerized and are illustrated by acrylate and methacrylate esters, such as ethyl acrylate, butyl acrylate or the corresponding methacrylate. Other monomers which can be used are styrene, alkyl styrenes, vinyl toluene, vinyl acetate, vinyl alcohol, acrylonitrile, vinylidene chloride, vinyl ketones and the like. Nonreactive monomers are preferred, those being monomers in which the single ethylenic group is the only group reactive under the conditions of polymerization. However, monomers which include groups reactive under baking conditions or with divalent metal ions such as zinc oxide may be used in some situations, like hydroxyethyl acrylate.

Other illustrative monoethylenically unsaturated monomers useful in this invention include, for example, propyl methacrylate, isopropyl methacrylate, butyl methacrylate, n-amyl methacrylate, sec-amyl methacrylate, hexyl methacrylate, lauryl methacrylate, stearyl methacrylate, ethyl hexyl methacrylate, crotyl methacrylate, cinnamyl methacrylate, oleyl methacrylate, ricinoleyl methacrylate, hydroxy ethyl methacrylate, hydroxy propyl methacrylate, vinyl propionate, vinyl butyrate, vinyl tert-butyrate, vinyl caprate, vinyl stearate, vinyl laurate, vinyl oleate, vinyl methyl ether, vinyl ethyl ether, vinyl n-propyl ether, vinyl iso-propyl ether, vinyl n-butyl ether, vinyl iso-butyl ether, vinyl iso-octyl ether, vinyl phenyl ether, a-chlorovinyl phenyl ether, vinyl/-naphthyl ether, methacrylonitrile, **acrylamide, methacrylamide**, N-alkyl acrylamides, N-aryl acrylamides, **N-vinyl pyrrolidone**, N-vinyl-morpholinones, N-vinyl-oxazolidone, N-vinyl-imidazole and the like including mixtures thereof. (emphasis added).

From this long list of mono-ethylenically unsaturated monomers, the Office Action identifies three that are encompassed by the instant claims (*i.e.*, acrylamide, methacrylamide, and N-vinyl pyrrolidone) to account for the amide-containing component of the claims.

Finally, the remaining two references, Blankenburg *et al.* and Morschhäuser *et al.* do not specify or even suggest using cationic and anionic monomers together, let alone in a specific ratio to each other. The rejection finds that these references render the claims obvious because the components of the claims (such as a cationic component, an anionic component, and a specific amine containing group) can be located someplace in the references even though the components are not described as being used together or being used together in any particular ratios.

In sum, applicants request pre-appeal brief review of the obviousness rejection because it fails to account for every element of the claims and fails to recognize that the art teaches away from proceeding as applicants have done.

Applicants remain committed to an expeditious resolution of this matter; and as always, applicants' agent is available by telephone for an interview if it would serve to assist in the speedy resolution and allowance of this case.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13111-00023-US from which the undersigned is authorized to draw.

Dated: May 4, 2009

Respectfully submitted,

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